Background: A 19-year-old (167.6 cm, 59.1 kg) female collegiate soccer player complained of aching in her right medial ankle, longitudinal arch, and plantar aspect of the heel. She reported no previous history of foot or ankle injuries. Evaluation revealed point tenderness on the medial ankle, posterior to medial malleolus and tenderness around the navicular tuberosity. Upon inspection, a supple pes planus foot was noted. All other clinical diagnostic tests were negative. MRI and bone scans were negative. The tenderness over the navicular, longitudinal arch and plantar foot pain was apparent at the beginning and end of activity, and the athlete was treated for plantar fasciitis.

Differential Diagnosis: Posterior tibialis tendonitis, plantar fasciitis, tarsal tunnel syndrome, exertional compartment syndrome. Treatment: Initial treatment involved placing the athlete in a Cam Walker for three weeks and incorporating ankle strengthening and stretching of the plantar fascia and gastrocnemius. Although the condition had been alleviated, the athlete reported with similar foot pain three months later, however the pain was now bilateral. After five months, the athlete began to wear full-length rigid custom orthotics and her treatment protocol focused on plantar fascia stretching; this continued for 8 months. Kinesiotape was also used for a short period of time. A year after the initial diagnosis and management of the condition, the athlete then reported tingling, numbness and cramping during exercise which limited full participation. This incident was the first since the development of the bilateral foot pain. At this time, the athlete presented with a positive Tinel’s sign bilaterally along the posterior tibialis nerve. After a complete neurological exam the athlete was diagnosed with bilateral tarsal tunnel syndrome. Once the athlete was diagnosed with tarsal tunnel syndrome, the rigid orthotics were replaced by gel inserts for soccer cleats, and the use of kinesiotape was discontinued.

Treatment also included symptom management and lower leg strengthening. Strengthening exercises included walking on toes and heel, picking up single marbles with toes, towel scrunching, rolling putty with feet, and ankle strengthening with Thera-Band for dorsiflexion, plantarflexion, inversion, and eversion. Motor-level electrical stimulation was also used on both feet for 15 minutes a day. Uniqueness: Tarsal tunnel syndrome typically develops secondarily, following trauma to the ankle; it is often unilateral in nature. In this particular case, the athlete developed symptoms bilaterally and had no previous history of ankle trauma or injury. It is plausible that the initial diagnosis of plantar fasciitis was correct and residual swelling lead to the entrapment of the posterior tibialis nerve. Conclusion: Since the diagnosis of bilateral tarsal tunnel syndrome, rehabilitation has resulted in significant progression, and the athlete has been able to return to full participation without complication. Due to the location of pain and description of symptoms, the initial diagnosis was plantar fasciitis, however the development of paresthesia lead to final diagnosis of tarsal tunnel syndrome. Because the two conditions share similar onset and location of symptoms, athletic trainers are encouraged to incorporate a neurological screen including the Tinel’s test to rule out tarsal tunnel syndrome. Furthermore, it is important for athletic trainers to note that athletes with pes planus may be more susceptible for this condition, as the strain placed upon the medial structures of the lower leg may lead to the onset of tarsal tunnel syndrome.

Word Count: 546